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**From:** Harrington, Jim (DEC) [jim.harrington@dec.ny.gov]  
**Sent:** 11/21/2014 9:51:05 PM  
**To:** Garbarini, Doug [Garbarini.Doug@epa.gov]  
**CC:** Ryan, Michael (DEC) [michael.ryan@dec.ny.gov]; Scharf, Steven (DEC) [steven.scharf@dec.ny.gov]; Swartwout, John (DEC) [john.swartwout@dec.ny.gov]  
**Subject:** RE: NAVY REPORTS HIGH LEVEL TCE GROUNDWATER HOT SPOT FOUND UPGRADIENT OF BWD PLANT 6!!

Doug – The question about us being comfortable with the treatment system at BWD 6 given the new levels is really for DOH. I spoke with Joe Defranco from NCDOH about it. He shared some of the history about the treatment system. In 1990 it was set up with a packed tower air stripper with a design load of 300 ppb. In 1997 the packed tower was upgraded to a design capacity of 600 ppb. In 2011, they added 4 GAC units which increased the design capacity to 1200 ppb. NCDOH is currently reviewing a design to replace the single packed tower with two packed towers which will have a design capacity of 4567 ppb. There is no schedule for implementation of this design. BWD's consultant is also working on a design of a advanced oxidation system that is primarily intended for 1,4 dioxane but will also control TCE. Joe's answer to the question regarding whether we are comfortable with the current system being able to provide adequate treatment is a "qualified yes". The extraction wells draw more water than the hot spot so some dilution will occur. However, we need to move quickly to address this hot spot since the system.

Status of the Sentinel Wells : 6 will be installed at MWD, 6 at SFD  
Vertical Profile Borings installed first to identify the well screen depths  
All VPB's installed at MWD, no contamination found at depth (some detections at 150' with MTBE) All Wells to be installed by Feb

Several VPBs installed at SFD. Wells to be installed July – Sept

Call or email me if you need additional information. I'll see you on Monday. Jim H

James B Harrington, PE  
Director, Remedial Bureau A  
Division of Environmental Remediation  
518 -402-9624

Please note my new email address  
Jim.Harrington@dec.ny.gov

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**From:** Garbarini, Doug [mailto:Garbarini.Doug@epa.gov]  
**Sent:** Friday, November 21, 2014 1:59 PM  
**To:** Harrington, Jim (DEC)  
**Subject:** RE: NAVY REPORTS HIGH LEVEL TCE GROUNDWATER HOT SPOT FOUND UPGRADIENT OF BWD PLANT 6!!

Hey Jim

Please see the third paragraph of John S' email below. Maybe you could fill me in on whether we still think that plant 6 can handle the levels we are now seeing.

Also, before EPA meets with the water districts (Tuesday at 10) could you let me know the status of all the "sentinel wells". I believe they have all been installed but wanted to double check.

Thanks

Doug

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**From:** Harrington, Jim (DEC) [<mailto:jim.harrington@dec.ny.gov>]

**Sent:** Friday, November 07, 2014 12:50 PM

**To:** Garbarini, Doug; LaPadula, John

**Cc:** Schick, Robert (DEC); Ryan, Michael (DEC)

**Subject:** FW: NAVY REPORTS HIGH LEVEL TCE GROUNDWATER HOT SPOT FOUND UPGRADIENT OF BWD PLANT 6!!

**Importance:** High

John/Doug – This is the document that I referred to. the attachment has the maps that show the location of the hot spot. Well 108D2 is the hottest and is located on a line between the GM 75 area ( the hotspot the could not be located and BWD Plant 6 ( wells 6-1 and 6-2). This location is well north of the leading edge of the plume and the southern lobe (George's finger). The Southern State Expressway is looked at as the leading edge. Jim H

James B Harrington, PE  
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Please note my new email address

[Jim.Harrington@dec.ny.gov](mailto:Jim.Harrington@dec.ny.gov)

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**From:** Swartwout, John (DEC)

**Sent:** Tuesday, October 21, 2014 2:37 PM

**To:** Harrington, Jim (DEC)

**Cc:** Scharf, Steven (DEC)

**Subject:** NAVY REPORTS HIGH LEVEL TCE GROUNDWATER HOT SPOT FOUND UPGRADIENT OF BWD PLANT 6!!

**Importance:** High

Jim-

I just got off a conference call with Lora Fly, Steve Karpinski, and Joe DeFranco. Lora discussed the groundwater findings detailed on the attached interim report. **The Navy has identified a significant groundwater hotspot between the Grumman ONCT extraction wells and Bethpage Water District Plant 6 (which is currently on-line operating on an as-needed basis).** The Navy is also concerned about South Farmingdale Plant 3.

Three rounds of data from monitoring wells installed as part of the ongoing vertical profile boring program south of the ONCT wells has identified a deep TCE groundwater hot spot with levels exceeding 1 ppm at several locations. See the figures in the attached report. A grab sample from new VPB 156 at a depth of 600 feet found 8 ppm (location but not the data result for this sample shown on the figures). Also, Joe DeFranco pointed out that the TCE level in the influent water at Plant 6-2 recently rose to 1200 ppb. The Navy hasn't yet determined whether this represents deep contamination which has gotten past the ONCT extraction wells. Further work will be done to explore that issue.

BWD is currently designing a new treatment system for Plant 6 which Joe reports will utilize 'advanced oxidation potential' treatment. The Navy is concerned that this new information may affect the design for the new treatment system. There is also concern about the increasing contaminant level since it will likely be 2 years before the new

system is constructed and operational and BWD needs Plant 6 to continue operating. BWD did construct a new well last year in Bethpage State Park, but it is not yet on-line.

Regarding hot spot treatment for this contamination, the Navy would like to arrange for the BWD to operate Plant 6 full-time (or turn it over to the Navy to operate as a remedial system). The Navy is also starting to look for a 2-acre parcel where a new extraction well, treatment plant (and recharge wells/ infiltration gallery/ recharge basin) could be located. This is difficult since the area is so densely developed. Piping extracted water over to the GM-38 plant doesn't seem like a good option.

The Navy will notify BWD (and likely other water districts) of this discovery this week by phone, to be followed immediately by transmittal of the attached data package by e-mail. **ONE QUESTION- SHOULD THAT TRANSMITTAL COME FROM DEC RATHER THAN FROM THE NAVY?** I need to get back to Lora on this ASAP.

There is already a RAB meeting scheduled for Nov. 5 in Bethpage and this issue will clearly become the major focus of that meeting. The Navy expects to schedule another conference call with the DEC and DOD in the near future for further discussion on this issue with a larger DEC and DOH audience.

John